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This really should be a separate category because nuclear is, if it's the right kind of nuclear, totally sustainable.

There are three ways we can get nuclear energy. One is from the light water reactor. All of the electrical energy in the world, I think, is produced from light water reactors. France produces about 75 percent of their energy; we, 19 or 20 percent of our electricity.

But fissure uranium is limited in the world. There is not enough to meet all future demands. But then we can go to breeder reactors. The breeder reactors do as the name implies, they produce more fuel than they use. So that is kind of a forever thing. With that, you buy some huge problems in transporting and enrichment. And you are hauling around weapons grade material, and then you're having to store away the end product for maybe a quarter of a million years. So although we have the potential for a lot of energy from breeder reactors, that comes with some big problems that we need to address.

Then there is nuclear fusion. We have a great fusion reactor; it's called the sun. And it, by the way, is the source of almost all of our present energy and past energy. All of the fossil fuels are there because the sun was shining a long time ago to make the plants and microbes and so forth grow. Well, we put about $250 million a year into nuclear fusion. I suspect we are a little closer now than we were 15 years ago when I came to the Congress. By the way, I happily vote for that $250 million because it's the only thing that gets us home free, if we can find fusion.

If you think you're going to solve your personal economic problems by winning the lottery, you're probably content that we're going to solve our energy problems by developing fusion. I think the odds are roughly the same. But because it is so incredibly important, because it gets us home free, I happily vote for the roughly $250 million we spend there.

Then the renewables, solar and wind. I want to spend some time talking about these.

I'm pretty sanguine about our future for electricity. We can produce a lot of electricity by nuclear; France produces about 75 percent of theirs. There are huge potentials from solar and wind. More solar energy falls on the Earth each day than we use all year long. It may be in less time than that that it falls on the Earth; it's an incredible amount of energy. The big problem, of course, is harnessing that energy. It is, by the way, the sun that makes the wind blow. The wind blows because there is differential heating, and so it makes the wind to blow. So all of this is kind of solar energy; wind, kind of secondhand solar energy.

The problem with solar and wind is the sun doesn't shine all the time, and the wind doesn't blow all the time. But we have a pretty constant demand for energy, so you've got to store it. And this is a huge challenge. And if you're talking about running your car on batteries, then you have to think, but, do we have the raw materials necessary for making enough batteries to run all the millions of cars in the world with batteries? I think we could produce enough electricity to do that. I'm not at all sure that there is enough raw materials out there to make the batteries necessary for these cars.

Then there is geothermal. I'm not talking about the heat pump that you tie to groundwater or ground temperature, which really, by the way, is what you ought to do. If you think about your heat pump, in the summer it's an air conditioner. It has to warm the outside air. It may be 100 outside, no matter. The heat pump has to increase the air, that temperature, in order to decrease the temperature in your house.

And in the winter time, what is it trying to do? When it's 10 degrees outside, the heat pump has to make it even colder outside so it can make you warmer inside. The 56 degrees, which is what it is here, looks awfully cool in the summer time, doesn't it? And awfully warm in the winter time. As a little boy, I was confused about how the spring house we had on our farm could be so warm in the winter time and so cool in the summer time. Of course when I went to school, I kind of figured that thing out.

Ocean energy. I mentioned an incredible amount of energy in the ocean, but harnessing that energy is a difficult thing. The waves and the tides represent, by the way, the tides are produced by the movement of the Moon, of course. That's an exception to energy produced in the past or now from the sun.

But the challenge there is that because this is so spread out, it's so difficult to harness. A good axiom is that energy, to be effective, must be concentrated. And, boy, is it concentrated in gas and oil and coal, just an incredible amount of energy there. Both the quantity and the quality of that energy is superior to anything that we can produce to take its place.

Now, agricultural resources, and this is an area, let me flip to the next chart. Let's look at corn.

Earlier this evening you heard quite a discussion of ethanol and its potential. And I don't want to quote ROSCOE BARTLETT here; I want to quote the National Academy of Sciences here. They did a study, and they concluded, and this was an article that appeared, I think, was it The Washington Post, and they said that if we took all of our corn for ethanol and discounted it for the fossil fuel input, which they said was 80 percent, by the way, some people think that we use more energy producing corn than we get out of the ethanol from corn; but even if it's 80 percent, and that's a realistic number, I think, if we used all of our corn for ethanol, no tortillas, no fattening of pigs and chickens from corn, used it all for ethanol, it would displace only 2.4 percent of our gasoline.

Now, if you just start with the corn and ignore the energy it took to produce the corn, then you get a whole different figure. So you need to be careful when people are talking to you about energy from ethanol. You know, the sun gratuitously produced that energy that put the oil in the ground; it doesn't gratuitously grow our corn.

We put huge amounts of fertilizer, this lower pie chart shows that nearly half the energy that goes into producing corn, and not one person in 50 outside of the farmer knows this, almost half the energy that goes into producing corn comes from the natural gas from which we make the nitrogen fertilizer. Nature does this, by the way. You may notice that your lawn is never as green watering it as it is after a thunderstorm; we used to call it ''poor man's fertilizer.'' The nitrogen in the air is converted by the lightning into a forum which is carried down into the ground. That's fertilizer by the rain.

This is their data. The National Academy of Science said if we use all of our corn for ethanol and discount it for fossil fuel, a little silly, something to burn the fossil fuels in another forum, which is corrosive, you can't put it in our pipes. You have to add it pretty much at the last minute because we don't have the infrastructure to move ethanol around. They wisely noted that if you tuned up your car and put air in the tires, you would save as much oil as using all of our corn to produce ethanol.

They then noted if we use all of our soybeans for diesel fuel, soy diesel, all of it, no soybeans exported to China, which was, a few years ago, our largest dollar export, by the way, because tofu, bean curd, as they call it, is the energy staple of the Orient, none of that, if we used all of our soybeans for soy diesel, it would displace 2.9 percent of our diesel.

Now, there are, I think, 70 million acres of corn, 60 million acres of soybeans planted on our best soil, pampered with fertilizers and pesticides and insecticides. And we would get, if we used it all for energy, 2.4 percent of gasoline and 2.9 percent of our diesel would be displaced.

Now, how much energy should we expect to get from weeds and switch grass and trees? I don't know. But I suspect that it's going to be difficult, sustainably, to get huge amounts of energy there because today's weeds and so forth are growing in large measure because last year's weeds died and are rotting and fertilizing them.

When you take the growth away from the rain forest, which looks like an incredibly wealthy environment in terms of nutrients, you leave laterite soils that will hardly grow anything because most all of the nutrients were in the plants that were growing.

The Department of Agriculture came to me and they were hyping cellulosic